Remarks

Claims 1-16 are pending. Claims 4-6 and 11-16 as they read on methods of inhibiting paraptosis with the JNK inhibitor SP 600125 are under consideration in the instant application. Claims 1-3 and 7-10 have been withdrawn from consideration as being drawn to a non-elected inventions.

Rejections Under 35 U.S.C. §112, First Paragraph

Claims 4-6 and 11-16 stand rejected under 35 U.S.C. §112, first paragraph, as lacking enablement allegedly because the specification provides no guidance as to how to inhibit paraptosis using SP600125. Undue experimentation is allegedly required because a skilled artisan can only tell by experimentation whether paraptosis will occur and whether SP600125 inhibits such paraptosis. For the claims directed to treatment of a condition associated with cell death, enablement is allegedly lacking due to the experimentation that would be required to determine the parameters for *in vivo* administration. Applicants respectfully traverse.

Applicants submit that the fact that "further experimentation would be necessary" to determine particular parameters does not preclude enablement of the claimed invention. To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without **undue** experimentation. *Genentech, Inc. v. Novo Nodisk A/S*, 108 F.3d 1361, 1365, 42 U.S.P.Q.2d 1001, 1004 (Fed. Cir. 1997), *see also* MPEP §2164.01(c),

fourth paragraph. Further, in *Johns Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1360 (Fed. Cir. 1998), the Federal Circuit clearly stated that routine experimentation does not constitute undue experimentation:

> The test [for undue experimentation] is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed.

Id. (*citing PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996); *see also In re Wands*, 858 F.2d 731, 736-40 (Fed. Cir. 1988)).

Base claim 4 is directed to a method of inhibiting paraptotic cell death in a cell by contacting the cell with an effective amount of the JNK inhibitor SP 600125, wherein the effective amount inhibits paraptotic cell death. Base claim 11 is directed to a method of treating a condition associated with excessive cell death by administering to a subject in need of such treatment an effective amount of the JNK inhibitor SP 600125, wherein the effective amount inhibits paraptotic cell death.

The specification teaches that inhibitors or neutralizing agents of the Jun N-terminal kinases (JNKs) JNKl and JNK2, which are MAP kinases activated in response to cellular stress, block both the paraptotic and the apoptotic cell death pathways. The specification also teaches that the JNK inhibitor SP 600125 is a neutralizing agent useful in the taught methods of inhibiting paraptosis. Applicants further teach throughout the specification that neutralizing agents, defined as " agent effecting a decrease in the activity, amount or rate of expression of the prior art reference molecule or compound, for example, Jun N-terminal kinase 1 (JNKl) or JNK2" can be used to inhibit paraptosis. In addition, the specification exemplifies in Example II the inhibition of paraptosis in a human cell line with a neutralizing agent for JNK. In particular, Example II discloses that antisense

oligonucleotide neutralizing agents for JNK1 or JNK2 were able to inhibit IGFIR-IC induced paraptosis in 293T cells. An effective concentration of 50-100nM concentration for the neutralizing agents also is provided. Applicants submit that these teachings would provide the skilled artisan with sufficient guidance to develop any particular parameters related to particular embodiments without undue experimentation.

In light of the above teachings and the well developed state of the art, Applicants contend that the application sufficiently enables those skilled in the art to practice the invention as claimed. Accordingly, withdrawal of this ground of rejection is respectfully requested.

Regarding 35 U.S.C. §102

The rejection of claims 4-6 and 11-16 under 35 U.S.C. §102(e) as allegedly anticipated by Bennett et al. (U.S. Patent Application No. 2004/0072888) is respectfully traversed. The independent rejection of claims 4 and 5 under 35 U.S.C. §102(a) as allegedly anticipated by Bennett et al., *Procl. Nat. Acad. Sci. USA*, 98(24):13681-13686 (2001), also is traversed.

The Office Action asserts that the Bennett et al. application teaches a method of contacting a cell in a mammal with an effective amount of the JNK inhibitor SP 600125. The Examiner alleges that, although the prior art reference is silent about inhibiting paraptosis, it is inherent that inhibition of paraptosis occurs whenever SP 600125 is administered to a cell or animal. With regard to the Bennett et al. PNAS publication, it is alleged that the passing prior art reference to "apoptosis" anticipates the claimed invention.

Applicants respectfully submit that the Examiner appears to disregard an important perquisite for making an inherency rejection, which is that the inherent feature must **necessarily** be present in the prior art:

> Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.

MEHL/Biophile Int'l Corp. v. Milgraum, 192 F.3d 1362, 1365, 52 USPQ2d 1303, 1305 (Fed. Cir. 1999)

To establish inherency, the evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the prior art reference, and **that it would be so recognized by persons of ordinary skill.**

In re Oelrich, 666 F.2d 578, 581-82 (C.C.P.A. 1981) (emphasis added).

The Court of Appeals for the Federal Circuit analyzes inherent disclosures on the basis of requiring an inherency to be "**necessarily present**" and not merely sometimes, occasionally, or possibly present. At the patent prosecution stage, the United States Patent and Trademark Office similarly requires an examiner to supply an applicant either with a rationale for the inherent disclosure or evidence demonstrating the presence of the inherency. The Examiner is reminded that is not Applicants' burden to prove that claim elements not taught by the Bennett et al. application are not necessarily present in the disclosures of Bennett et al. The prior art references are silent about the SP 600125 induced inhibition of paraptosis in a cell. Apoptosis and paraptosis are distinct forms of cell death.

Furthermore, the Patent Office has long acknowledged that the initial burden in establishing an inherency rejection rests with the Examiner, noting that:

> in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination

Bennett et al., *Procl. Nat. Acad. Sci. USA*, 98(24):13681-13686 (2001) and Braun et al., *Expert. Opin. Investig. Drugs* 8(10):1599-1610 (1999), cannot support the instant rejection under 35 U.S.C. §103(a). Accordingly, Applicants respectfully request removal of the rejection.

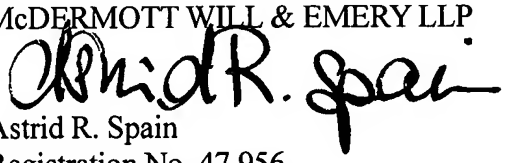
Conclusion

In light of the Remarks herein, Applicants submit that the claims are now in condition for allowance and respectfully request a notice to this effect. The Examiner is invited to contact the undersigned attorney with any questions related to this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



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